

II. *A Letter from Mr. Henry Baker, F. R. S. to the President, containing an Extract of a Letter from Mr. William Arderon, F. R. S. to Mr. Baker, giving an Account of the present Condition of the Roman Camp at Caistor in Norfolk, with a Plan of it ; and also a Representation of an Halo or Mock-Sun observed by the same Gentleman July 11, 1749.*

S I R,

London, October 26, 1749.

Read Nov. 2. 1749. **I** TAKE the Liberty to lay before you an Account lately sent me by my ingenious Correspondent Mr. *William Arderon, F. R. S.* of the present Condition of the *Roman Camp at Caistor*, in the County of *Norfolk*, together with a Plan or Drawing of the same, taken by himself upon the Spot, in the Month of *June* last : At which Time he went thither on purpose to examine it. As this Camp is a remarkable Piece of *Roman Antiquity*, and I have always found Mr. *Arderon* extremely accurate in his Observations and Descriptions, they may I hope be thought deserving your Notice. I take likewise this Opportunity of presenting you the Account and Representation of an *Halo*, or Mock-Sun, seen by the same diligent Observer on the 11th Day of *July* last.

Permit

Permit me, at the same Time the Honour of assuring you that I am with the greatest Respect,

S I R,

*Your most obedient humble Servant,*

H. BAKER.

*The Extract of a Letter from Mr. Ardron to Mr. Baker.*

*Dear Sir,*

IN Consequence of my Promise to you I have been at *Castor*, to view the present Condition of that celebrated *Roman* Camp, whose venerable Ruins appear there ; and I now send you the best Description of it my Observations can furnish out. Indeed when I made such Promise, I little thought how difficult a Task I had undertaken, and how easily the most skilful in these Matters may be mistaken, amidst ruinous Heaps and Vestigia nearly effaced by Length of Time. However, I can assure you, no Care or Caution has been wanting, and the plain Truth shall be related with all the Exactness possible.

The Town of *Castor* is at present in a very low Condition, containing no more than between twenty and thirty small Cottages. It stands about four Miles South-west of *Norwich*, and by Tradition, and some learned Authors, is supposed to have been a considerable City, out of whose Ruins *Norwich* took its Rise. *Skinner* says, in his *Etymologicon*, "*Castor in Com. Norf. olim VENTA ICENORUM: ex cujus Ruinis orta est Norwich civitas.*" However, at this Day (excepting the Camp) not the least Trace or Footstep of any-thing remarkable is left remaining.

The

The Camp itself lies near a Furlong South-west from the Town of *Caſtor*, and leads you by a gentle Deſcent down to the little River *Wentſum*, which ſwiftly glides cloſe to the End thereof, and no Doubt, at the firſt forming of the Camp was deſigned to be Part of the Fortification on that Side, as well as to ſupply the Army with Water, and to bring up ſuch Things as they wanted from the Sea, if ſo be their Communication by Land ſhould at any Time be impeded. What confirms me in this Opinion, is a large Staple and Ring of Iron, which I myſelf have ſeen on the Side of the Tower that ſtands near the River ; tho' now I find that curious Monument of Antiquity is taken away. However, on my Suppoſition, this River muſt have been much larger at that Time than it is at preſent, or it could have been of little Uſe for Water-carriage, from the Smallneſs and Shallowneſs of its Stream.

This River by ſome is called *Taus*, or *Teſe* : But I imagine it did not formerly take that Name until it approached the *Roman Camp* at *Teſeburgh*, three or four Miles higher.

We are told by Tradition, as well as by ſome learned Authors, that the Sea came up to this Camp ; and indeed every intelligent Obſerver muſt confeſs, that the Marine Bodies found in every Part of *Norfolk*, on the higheſt Hills, as well as in the loweſt Pits and Valleys, are indubitable Proofs, that at ſome Time or other the Sea muſt have covered this whole County : But then we may be aſſured, by the preſent Condition of this Camp, that the Sea hath not exceeded the Level of it ſince it hath been in Being, which, if we credit ſeveral of our antient Hiſtorians, it was upwards

wards of 1700 Years ago. It may therefore serve to prove, that the Sea since that Time has not exceeded these Bounds, and that the Fossils dug up above this Level are more antient than it, tho' we have no proper *Data* to discover how long before, the Sea had passed this Height.

I have been pretty exact in examining the Situation of this Camp, imagining the two Sides had pointed due East and West, and the two Ends North and South : But I find they differ from it full ten Degrees, after allowing for the Variation of the Needle : Whence it is plain the Meridian of the Place must have altered better than half a Degree each Century to the Westward, provided the Situation of the Camp was placed due North and South when it was first formed. But possibly the *Romans* might not be exact as to the Points of the Compass, or perhaps this Variation was at first dispensed with to accommodate the Camp to the natural Declivity of the Ground. These Difficulties however may better be cleared up, if some ingenious Gentlemen would take the Trouble to examine some other *Roman* Camps in different Parts of this Kingdom, to discover whether the *Romans* paid a strict Regard to the disposing of their Camps with their Sides to the four cardinal Points of the Compass, which I think it will nearly amount to a Demonstration that they did, if they are found to agree with this Camp at *Castor* in its Variation from due North and South.

The Figure of the Camp is not a Square (as it is described by most Authors who have writ upon it) but a Parallelogram, whose two longest Sides are each 440 Yards, and its Ends or two shorter Sides

360 Yards each. These are its Dimensions without-side the Rampart and Ditch ; but within-side the said Ditch and Rampart the Length is 392 Yards, and the Breadth 264. I measured the Breadth of the Fosse and Rampart, which I found in some Places, where it remains most perfect, to be 48 Yards, tho' in others not above 30. And according to my Computation the whole Ground taken up, including the Ditch and Rampart, is 32 Acres, 2 Rood, and 36 Pole ; or the Area within the Ditch and Rampart 21 Acres, 1 Rood, 21 Pole.

At about three or four Furlongs North-west of the Camp rises a Ridge of Hills, appearing something like a second Rampart, and descending gradually to the Camp. These Hills add greatly to the Prospect, and must have been no little Advantage to the Safety of the Place, as a constant Watch might be kept thereon to prevent any Surprise ; nor could an Enemy advance nearer than the Summit of these Hills without being exposed to the View of the whole Camp.

Three Sides only of this Camp have been fortified with a Rampart, whose upper Part was faced with a thick and strong Wall made of Lime and Flints, of which Wall there are still Remains in several Places of the Rampart, besides a very deep Ditch that seems to have been most considerable on the East and South Sides.

The Wall on the North Side appears to have been built at two different Times ; that is, it seems to have been raised higher than it was built at first, at some Distance of Time afterwards ; for a Parting may be observed at a certain Height running from End to End.

The

The Ruins of two old Towers still remain, one of which stood on the North Side, and the other at the West End ; the last of which is at present the most considerable of the two. They were both built in a manner perhaps peculiar to the *Romans* at that Time, and which it may not be improper to describe. They began first with a Layer of Bricks laid flat as in Pavements ; on that they placed a Layer of Clay and Marle mixed together, and of the same Thickness as the Bricks ; then a Layer of Bricks, afterwards of Clay and Marle, then of Bricks again, making in the whole three Layers of Bricks and two of Clay : Over this were placed Bricks and Lime 29 Inches, the Outside being faced with Bricks cut in Squares (like the modern Way of Building in some Parts of *Norfolk*), then Bricks and Clay again *Stratum super Stratum*, as high as the old Ruins now remain standing.

The Mortar is found extremely hard at this Day : It is a Composition of Lime, Sand, and Ashes, and so compact that I could by no Means break a Piece of it of an Inch Diameter from the Base of one of the Towers at the East Gate, but on striking it with a sharp Flint it flew off in Dust.

The *Roman* Bricks which I examined, were made of two different Sorts of Clay mixt ; when burnt one appears red and the other white : At the Time of my viewing them they were exceeding hard and solid, and far superior to any thing of the Kind now made with us. Perhaps they are little worse than when they were first laid down.

These Bricks were made without the Assistance or Addition of Sand, as is too much the Practice at

present here in *Norfolk* : For when Sand enters the Composition in any considerable Proportion, it renders the Bricks friable, soft, and rotten, subject to be broke or ground to Pieces with the least Motion or Pressure.

I took the exact Dimensions of several of these Bricks, and found their Length to be  $17 \frac{4}{5}$  Inches, or a *Roman* Foot and Half ; and their Breadth  $11 \frac{6}{5}$  Inches, or precisely a *Roman* Foot : which I think may serve as some Proof that the *Roman* Measures handed down to us by several Authors are right, and may likewise inform us of the proportionable Stature of Man at that Time. The Thickness of these Bricks is  $1 \frac{3}{10}$  Inch.

The great Number of *Roman* Medals that have been, and are still found in and about this Camp, are to me a Matter of great Wonder. One Lady who lives near the Place, has (I am credibly informed) picked up at least an hundred with her own Hands, and several are daily gathered up by Boys, and sold to Strangers who come to visit the Place.

That these Pieces have been used as Money I think exceeding clear, from their different Degrees of Perfection, some being worn almost quite smooth, others having imperfect Busts without Letters, and others again having both the Busts and Inscriptions fair and legible, which could not happen, I think, but from their different Wear as Money. But then how such Quantities of them should become scattered, as if sown, in this and other *Roman* Stations, is a Difficulty I must leave to those better versed in these Matters to resolve.

I send

I send herewith a Plan of the Camp in its present Condition, [TAB. I. *Fig. 1.*] that my Description may the better be understood; and I send along with it the Appearance of a particular kind of Halo, which was observ'd at *Norwich*, on the 11th of *July* last, at 5 o'Clock in the Evening; the Colours were exceeding vivid, and the Centre of it, contrary to what I ever yet saw, was not in the Sun, but in the Zenith.

The Sun's Rays shone through the Clouds at the same time, as they frequently do when the Sun is near the Horizon. In short, the Drawing [TAB. I. *Fig. 2.*] which represents the Whole, makes any farther Description of it needless; and I shall only add, that I am,

*Dear Sir,*

*Your most humble Servant,*

*Norwich*, Aug. 28.

1749.

William Arderon.

III. *Part of a Letter from Leonard Euler, Prof. Math. at Berlin, and F. R. S. To the Rev. Mr. Caspar Wetstein, Chaplain to his Royal Highness the Prince of Wales, concerning the gradual Approach of the Earth to the Sun. Translated from the French, by S. T. M. D. F. R. S.*

*Berlin*, June 28. 1749.

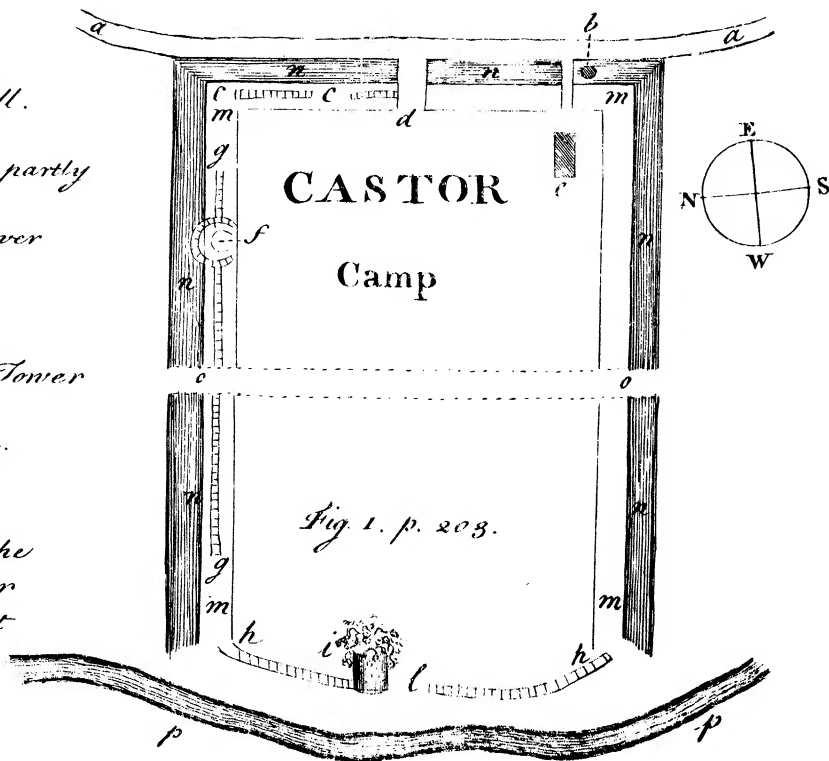
Read Nov. 2.  
1749.

**M**onsieur le Mounier writes to me, that there is, at *Leyden*, an *Arabic* Manuscript of *Ibn jeunis* (if I am not mistaken

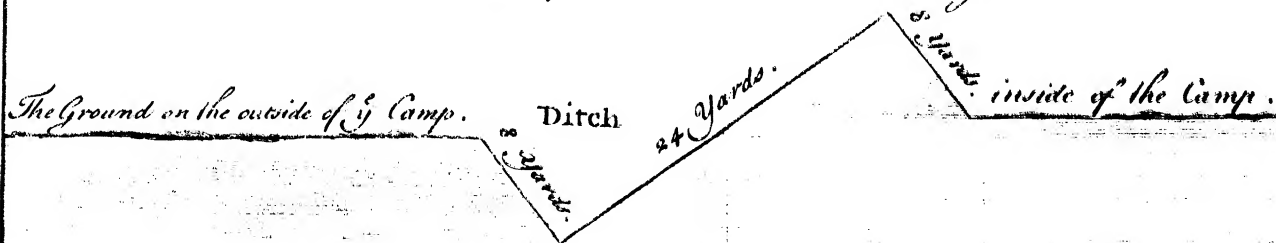


Venta Icenorum.

- aa. The Road to Castor.*  
*b. A Spring Well.*  
*cc. The remains of a Wall.*  
*d. The Porta Pretoria.*  
*e. Castor Church built partly of Roman bricks.*  
*f. The Base of an old Tower lately discover'd.*  
*gg. The Ruins of a Wall.*  
*hh. The bottom of a Wall.*  
*i. The Ruins of an old Tower over grown with Ivy.*  
*l. The Porta Decumana.*  
*mmmm. The Rampart.*  
*nnnn. The Ditch.*  
*oo. A Passage cut thro the Rampart but whether Original Gates or not is uncertain.*  
*pp. The River Wentsum or Wentfor.*



*A Section of the Rampart and Ditch as they are to be seen at this Day.*



An Halo.

*Fig. 2. p. 203.*

